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Philip Slayton

QUANTITATIVE METHODS AND SUPREME COURT CASES

By PHILIP SLAYTON*

It is generally thought necessary, in order to grasp the "meaning" of a judicial decision, to analyse virtually every word uttered by a judge. Scholars eagerly seek in judgments, legal, logical, and even literary inconsistencies. Academic lawyers argue over what in a given case is the *ratio decidendi* and what is merely *obiter*. Barristers and the bench, committed to *stare decisis,* pore over the texts of decisions, looking for a solution to a worrying case.

A variety of forces opposed to this tradition, building in strength over a number of years, have lately coalesced. The result is a radical departure by some in the way of analysing judicial decisions. In Canada this has been most apparent in scholarly writing on the Supreme Court of Canada. The old style academic article,[1] developing general statements of legal principles by extensive analysis of individual decisions, now competes with the new methodology of linear cumulative scaling, or scalogram analysis.[2]

Scalogram analysis is one research method in a complex scheme of research methods, research theory, and substantive theory. Glendon Schubert has identified four levels of methodological complexity: statistical description of empirical data collected, linear cumulative scaling, multi-variate

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*Assistant Professor of Law, McGill University. I should like particularly to express my gratitude to Professor Sydney Peck, of Osgoode Hall Law School, York University, for gently correcting many of my misconceptions of quantitative methods. My thanks also to Professor Glendon Schubert, of the Department of Political Science, University of Hawaii, who pointed out serious inadequacies in my study of behaviouralism.

[1] Such as O'Halloran, *Criminal Law and the Supreme Court 1923-1947* (1948), 26 Can. Bar Rev. 158; Laskin, *The Supreme Court of Canada: A Final Court of and for Canadians* (1951), 29 Can. Bar Rev. 1038; Read, *The Judicial Process in Common Law Canada* (1959), 37 Can. Bar Rev. 265; Azard, *Cour sûpreme du Canada et l'application du droit civil de la province de Québec* (1965), 43 Can. Bar Rev. 553; Slayton, *The Supreme Court of Canada and the Common Law of Contract* (1971), 17 McGill L.J. 476; and Weiler, *Groping Towards a Canadian Tort Law: The Role of the Supreme Court of Canada* (1971), 21 U. of Toronto L.J. 267. Weiler's article is probably not a good example of traditional analysis, forming part of a series of articles with precise and in some respects novel theoretical underpinnings.

[2] See, for example, Peck, *The Supreme Court of Canada, 1958-1966: A Search for Policy through Scalogram Analysis* (1967), 45 Can. Bar Rev. 666; Peck, *A Behavioural Approach to the Judicial Process: Scalogram Analysis* (1967), 5 O.H.L.J. 6; Peck, *A Scalogram Analysis of the Supreme Court of Canada, 1958-1967* in Schubert and Danelski (eds.), *Comparative Judicial Behaviour* (New York: Oxford University Press, 1969) 293; and Fouts, *Policy-Making in the Supreme Court of Canada, 1950-1960* in *Comparative Judicial Behaviour* 257. Russell, in *The Supreme Court of Canada as a Bilingual and Bicultural Institution* (Ottawa: The Queen's Printer, 1969), employs rather crude quantitative techniques. Says Russell himself at p. 114: "... we hasten to acknowledge the relatively primitive quality of the quantifying techniques we have employed. With the exception of the bloc-voting analysis derived from the work of Glendon Schubert, the other schemes were developed very quickly and in a completely *ad hoc* manner."

analysis, and causal analysis. He has described four levels of "research theory" which he believes correspond closely to the levels of research methods: sociological theory, cumulative scaling concerned with attitudinal theory as a branch of social psychology, metric factor or smallest space analysis investigating judicial ideology as a branch of social psychology, and a special kind of mathematical statistics which facilitates causal analysis. Finally, Schubert lists five levels of what he calls substantive theory — sociological jurisprudence, legal sociology (investigating the cultural bases for adjudicative systems), political sociology (having as its objective the empirical description of adjudicative systems as an aspect of political behaviour), the social psychology of elite ideology, and general decision-making theory.[3]

The origins of the scaling method[4] are apparently to be found in psychophysics, a science developed in the nineteenth century by Gustav Fechner.[5] Gulliksen describes psychophysics as including "the measurement of sensory attributes and the quantification of perception, in order to correlate these psychological scales with physical measurements of the stimuli."[6] In 1927, a paper by Louis Thurstone[7] "developed the law of comparative judgment for data collected by Fechner's method of paired comparisons and showed that it was possible to obtain internally consistent measurements for various psychological attributes such as, for example, the intensity of feeling toward various 'nationalities,' the judgment of the various merits of compositions, or preferences for various foods or gifts."[8] The 1927 Thurstone paper, according to Gulliksen, was the inspiration for a tremendous body of work on procedures for constructing scales for the measurement of psychological attributes.

Scalogram analysis is only one of many measurement procedures existing at the same level of methodological complexity. Torgerson divides these procedures into three kinds: the subject-centered approach, in which variation in the reaction (responses) of the subjects to the stimuli is attributed to individual differences in the subjects; the judgment approach, in which variations in the reactions of subjects to the stimuli is attributed to differences in the stimuli; and the response approach, in which variability of reactions to stimuli is ascribed to both variation in the subjects and in the stimuli.[9] Scalogram analysis exemplifies the response approach, in which "the task set for the subject is to respond to a stimulus on the basis of the position of the

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[3] For this analysis, see Schubert, *From Area Study to Mathematical Theory*, in *Comparative Judicial Behaviour*, *supra* note 2 at 13-15.

[4] We are now discussing, to use Schubert's system, the linear cumulative scaling level of methodological complexity, and the cumulative scaling level of research theory (concerned with attitudinal theory as a branch of social psychology).

[5] See Gulliksen, *Foreword*, in Torgerson, *Theory and Methods of Scaling* (New York: Wiley, 1958) at v.

[6] *Id.*

[7] Thurstone, *A Law of Comparative Judgment* (1927), 34 Psychol. Rev. 273.

[8] Gulliksen, *supra* note 5 at v.

[9] Torgerson, *supra* note 5 at 46. Torgerson has little interest in the subject-centered approach; most applications of this approach he considers simply "measurement by definition."

stimulus in relation to the subject's own position with respect to the attribute."[10] In the judgment approach, "the task set for the subject is to evaluate the stimuli with respect to some designated attribute."[11] Torgerson distintinguishes between the two approaches in this way:

> ... consider two attitude statements taken from Thurstone and Chave's monograph (1929, p. 61).
>
> 1. I find the services of the church both restful and inspiring.
>
> 2. I think the church is a parasite on society.
>
> In the judgment approach, the task set for the subject might be to judge which statement is more favourable to the church. A subject would be expected to pick statement 1 regardless of his own attitude toward the church. In the response approach, the task set for the subject might be to pick the statement with which he is in closest agreement. In this case, both his own attitude and the attitude reflected by the stimuli act to determine his response.[12]

Within the category of response methods, Torgerson draws some crucial distinctions. Deterministic models state an ideal case which is not expected to correspond exactly with reality; accordingly, there is no provision for error. The result is that "all the variations in the responses of subjects to stimuli are accounted for in the model by the positions of the subjects and the positions of the stimuli."[13] Probabilistic models, by contrast, incorporate the idea of error and can account for unsystematic variation. A further classification examines the nature of the subject's task. He may be required to respond categorically (simply agreeing or disagreeing), or comparatively (ordering stimuli according to preference.) Scalogram analysis, to adopt these additional distinctions, is deterministic and requires categorical responses.[14]

Glendon Schubert was one of the first seriously to experiment with the applicability of cumulative scaling techniques to judicial decisions. Writing in 1959, Schubert observed that scaling cases differed from scaling in social-psychological research in at least two important respects. First of all, in social-psychological research, the size of the set of items constituting what is known as "the universe of content" is generally unknown; it is difficult or impossible to ask all possible questions relating to the topic, and equally difficult or impossible to prepare what is without question a fair sample of all possible questions. By contrast, argued Schubert, the student of judicial cases can easily define his universe of content, (e.g., *all* Supreme Court decisions dealing with *mens rea,* or *res ipsa loquitur*), and the universe of content so defined is of known size and can be exhausted. This conceptual difference produces a procedural difference; "in attitude research, one often eliminates items on the ground that 'they do not scale'; we [legal scholars]

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[10] *Id.* at 48.

[11] *Id.*

[12] *Id.* at 48-9. The Thurstone and Chave monograph referred to is *The Measurement of Attitude* (Chicago: University of Chicago Press, 1929).

[13] *Id.* at 59.

[14] *Id.* at 60.

have no occasion or justification for excluding cases on these grounds."[15] Writes Schubert:

> If, after analysis, the researcher [social psychologist] finds some item to evoke an unusual number of responses which do not fit the hypothesized scale pattern, he can draw the following alternative inferences: either he can argue that the offending item should never have been included since it elicits responses along some dimension other than the universe to be scaled; or else he may argue that the item clearly belongs in the hypothesized universe and that, therefore, given the large number of deviant responses, the theoretical continuum has no counterpart in the empirical world — the attitude is "not scalable." ...
>
> In the scale analysis of judicial cases, the items are not "constructed," and we cannot argue therefore that their connotations are other than those "intended." Rather, cases are selected by classifying the known collection of all cases decided. ... For this reason, our scales contain two types of items that would ordinarily not be found in scales constructed by social psychologists: items which "do not scale," and items which "duplicate" one another.[16]

The second important respect in which social-psychological scaling differs from scaling cases, notes Schubert, is in the definition of "respondent." In the field of social psychology, "the entire 'instrument' is given to all respondents. Consequently, the respondents answering each item are identical and hence equal in number. Conversely, all respondents react to all items in the same set."[17] But in scaling judicial decisions, a large non-response factor must be taken into account, since (1) there may be vacancies on the court being examined, (2) a judge may decline to participate in a given case, (3) a judge who participates in a case may decline to vote on the merits, and (4) judges vote only in cases considered during their incumbency, but universes of content extend well beyond any given incumbency.[18]

Schubert's 1959 book, in addition to indicating in general terms the way in which a technique developed in the field of social psychology could be applied to the analysis of judicial decisions, described precisely how scalograms of judicial cases could be constructed,[19] and made a number of experimental applications of scalogram analysis to the Supreme Court of the United States.[20] Schubert's pioneering work continued in 1963 with the publication of *Judicial Decision-Making*,[21] essays edited by Schubert, and with the 1965

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[15] Schubert, *Quantitative Analysis of Judicial Decisions* (Glencoe: The Free Press, 1959) 269-70.

[16] *Id.* at 276.

[17] *Id.* at 277.

[18] *Id.* at 278.

[19] *Id.* at 280-290.

[20] *Id.* at 290-376. These pages include a discussion of the Kort procedure for predicting decisions mathematically. See Fred Kort, *Predicting Supreme Court Decisions Mathematically: A Quantitative Analysis of the 'Right to Counsel' Cases*, (1957), 51 Am. Pol. Sci. Rev. 1.

[21] (Glencoe: The Free Press, 1963). This volume includes studies by Sidney Ulmer, Stuart Nagel, Harold Spaeth, Joseph Tannenhaus, Fred Kort, and Ulf Torgerson. Another volume of case-studies edited by Schubert (with David Danelski) is *Comparative Judicial Behaviour* (London: Oxford University Press, 1969).

study *The Judicial Mind.*[22] In *The Judicial Mind,* Schubert described the scaling methodology in this way:

> ... the cases which the Court has docketed for decision-making on the merits of the issues presented are conceptualized as being equivalent to the items of a questionnaire. Each case asks the justices to respond to the question: is your attitude toward value X sufficiently favourable that you believe that a claim of degree Y should be upheld? ... X defines the content of the scale variable which is perceived by the respondents to be the relevant criterion for deciding the case; Y is the perceived verbal statement which specifies the location of the stimulus-point on the scale ...
>
> If a judicial respondent accepts the defined valuation, he is scored as having voted affirmatively; if he rejects it, he is scored as having voted negatively. The scale matrix consists of scores for the votes of the respondents, with each column consisting of the set of votes of a single justice for all decisions in which he participated, and each row consisting of that set of votes for all justices who participated in a particular decision... In constructing the scale, the objective is the usual one of maximizing the internal consistency of the voting patterns for the respondents ...[23]

Canadian writers have not embraced cumulative methods with the fervour of some of their American counterparts.[24] Professor Sydney Peck's claims for scalogram analysis, for example, have been consistently modest. To quote a passage I have already quoted elsewhere:

> ... a scalogram should be taken, *prima facie,* only as describing the effect of justices' votes on a particular type of claim or value raised by a group of cases. Regarded alone, the scalogram does not indicate directly the justices' attitudes to the value; nor does it establish that the justices decide cases on the basis of their attitudes, although it may suggest the possibility that they do. Such a possibility must be assessed in the light of the reasons for judgment in the scaled cases, the unanimous decisions which do not appear on the scale, and the whole range of legal and sociological insights which are revealed by a traditional and realist analysis of the case.[25]

As a criticism of the kind of work done by Peck, I have noted elsewhere that preparation of a scalogram requires characterization of the issue raised

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[22] (Evanston: Northwestern University Press, 1965). In 1965 Schubert also published *Judicial Policy-Making* (Glenview: Scott, Foresman, 1965), a study of the judiciary based on what is known as "systems theory" or "structional-functional analysis."

[23]. Schubert, *The Judicial Mind, supra* note 22 at 75-77. This work is replete with examples of the application of the scaling methodology. For a detailed account of the theory of scalogram analysis, see Torgerson, *supra* note 5 at 307-317, and Coombs, *A Theory of Data* (New York: Wiley, 1964) 227-236. For a simple description of cumulative scaling, see Tannenhaus, *The Cumulative Scaling of Judicial Decisions* (1966), 79 Harv. L. Rev. 1586, quoted and discussed by Slayton, *A Critical Comment on Scalogram Analysis of Supreme Court of Canada Cases* (1971), 21 U. of Toronto L.J. at 396-7.

[24] Extravagant claims for the method have been rejected by some American writers. Peck, *supra* note 2, 5 O.H.L.J., footnotes 81, 82a and 88, cites the following writings critical of judicial behaviouralists: Becker, *Inquiry into a School of Thought in the Judicial Behaviour Movement* (1963), Midw. J. Pol. Sci. 254; Mendelson, *The Neo-Behavioural Approach to the Judicial Process: A Critique* (1963), 57 Am. Pol. Sci. Rev. 593; Mendelson, *The Untroubled World of Jurimetrics* (1964), 22 J. Pol. 914. For a different evaluation, see Baade, *Foreword* (1963), 28 Law & Contemp. Prob. 1.

[25] Peck, *supra* note 2, 45 Can. Bar Rev. at 681, quoted by Slayton, *supra* note 23 at 398. Similar passages appear in Peck, *supra* note 2, 5 O.H.L.J. at 21, and Peck, *supra* note 2, *Comparative Judicial Behaviour* at 294.

by cases that may be of interest (so that an appropriate universe of content can be constituted), and that it is the researcher who makes the required characterization. I wrote:

> ... [the researcher] is willing to ignore the spectrum of reasons why a judge might decide the case ... and assume that the judge's vote is an answer to his, the researcher's, postulated question. It appears that although scalogram analysis proceeds on the assumption that judges decide cases on the basis of their attitudes towards policy issues, the technique requires that the analysts, by postulating questions which characterize cases, impose their, the analysts', attitudes on the judiciary.[26]

Professor Peck has pointed out[27] that if one regards the scalogram as simply being a descriptive device which shows the effects of judges' voting patterns on particular types of issues, then this criticism of mine is at the very least irrelevant, since no assumptions about judges' *attitudes* have been made. The researcher has, of course, exercised judgment in deciding what cases are relevant to what issues, and may well have decided incorrectly. Such a mistake would mean that the scalogram was misleading in showing how the Court has affected a given issue, but it would *not* mean that judges' attitudes had been incorrectly characterized.

Professor Paul Weiler has recently been publishing a series of studies of the Supreme Court of Canada which employs, to some extent, the scalogram method.[28] Weiler's attitude towards the method is ambivalent. On the one hand, he apparently feels that behavioural analysis can indicate the role of judicial attitudes in decision-making. He writes that "behavioural analysis of the flow of decisions is likely to isolate ... attitudes and indicate their influence on judicial choices made"[29] and says of the significance of the cumulative scale that "if statistical criteria excluding chance are met, it becomes legitimate (though perhaps not scientifically *necessary*) to infer that the judges perceived these cases along this particular dimension and voted in accordance with their attitude to it."[30]

On the other hand, Weiler recognizes many of the defects of cumulative scaling, and is cautious in use of the method. He notes that "judges may

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[26] Slayton, *supra* note 23 at 397. Peck alludes to this point in 45 Can. Bar Rev. at 674.

[27] In private correspondence with the author, Professor Peck suggests, I think correctly, that in my earlier article I failed to differentiate clearly between scalogram analysis as a technique for measuring attitudes and scalogram analysis as a descriptive device only. Professor Peck writes: "I think that our approach is different in that you have not drawn as sharp a distinction as I have between the two uses of scalogram analysis. I think that the distinction is important as some points in your critique are relevant to the first use of scalogram analysis but not to the second..."

[28] Weiler, *The Supreme Court of Canada and the Doctrines of Mens Rea* (1971), 49 Can. Bar Rev. 280; Weiler, *Groping Towards a Canadian Tort Law: The Role of the Supreme Court of Canada* (1971), 21 U of Toronto L.J. 267; Weiler, *The 'Slippery Slope' of Judicial Intervention: The Supreme Court and Canadian Labour Relations 1950-1970* (1971), 9 O.H.L.J. 1. Weiler laid the foundation for his study of the Supreme Court in *Two Models of Judicial Decision-Making* (1968), 46 Can. Bar Rev. 406, and in *Legal Values and Judicial Decision-Making* (1970), 48 Can. Bar Rev. 1.

[29] *Id.*, 49 Can. Bar Rev. at 291.

[30] *Id.* at 292.

not have perceived their votes as expressing, the values which the behaviouralist imputes to their decision."[31] More generally, Weiler writes that "I assume that courts are more than judicial voters, and that the significant aspects of judicial behaviour are not confined to their votes,"[32] and that "judicial development of rules is the product of reasoned opinions and this process of reasoning must be assumed to have some influence on the rules that result."[33] It is interesting to note that in Weiler's article on *mens rea*,[34] only fourteen of eighty-three pages are devoted to scaling. In his study of the development of Canadian tort law by the Supreme Court,[35] Weiler relied entirely on what might be termed "traditional substantive analysis," although he indicated in a note[36] that he has completed behavioural analyses of the Court's "decision-making and opinion-writing pattern" in the tort field which will be published later. Weiler's continued caution in the use of the method is evident from this passage in his tort article:

> ... it would be a great surprise if such behavioural techniques as scaling judicial decisions did not disclose that the personal attitudes of the judges play a significant role in determining the pattern of decisions which result. This corrective to the analytic and 'black letter' approach to reading judicial opinions should not be pressed to the opposite extreme. The requirement that opinions be written to justify a vote, that a majority must be constructed from groups whose policy and legal attitudes vary, and the customary expectations attendant on judicial reasoning all impose substantial limitations on the scope for advancement of preferred values.[37]

The way in which Weiler uses behavioural techniques can perhaps best be seen in his study of the Court and Canadian labour relations.[38] There, three tables, depicting the activity of the Court in the labour relations field, the voting and decisional pattern in cases involving direct conflict between union and employer, and the attitude of the Court towards Labour Board decisions, establish a framework for an extensive traditional discussion of the relevant cases. Weiler apparently sees behavioural methods as a useful device indicating fruitful lines for traditional inquiry, and certainly does not see such methods supplanting the old ways. Unlike Peck, however, Weiler does believe that behavioural methods can tell us about the influence of attitudes on decisions, rather than simply about the influence of decisions on issues.

Peter Russell is a political scientist; one might therefore expect him to be more at home with quantitative analysis than a lawyer such as Peck or Weiler. In fact, the quantifying techniques he has used in analysis of Supreme Court of Canada cases[39] are somewhat cruder than those employed

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[31] *Id.* at note 9.

[32] *Id.* at 291.

[33] *Id.*

[34] *Supra* note 28, 49 Can. Bar Rev.

[35] *Supra* note 28, 21 U. of Toronto L.J.

[36] *Id.* at 150 at 326.

[37] *Id.* at 326.

[38] *Supra* note 28, 9 O.H.L.J. 1.

[39] *Supra* note 2.

in other Canadian studies.[40] This crudeness may simply be symptomatic of an uncertainty and lack of interest on Russell's part in the precise significance and use of quantitative methods as applied to appellate tribunals. Peck considers the value of such methods to be that they demonstrate the impact of appellate decisions on specific issues; Weiler suggests, albeit hesitantly and with qualification, that these methods tell us something about judicial attitude. Russell displays little concern with this crucial question. On balance, he appears to favour Peck's position. He is not prepared to draw categorical conclusions from his data about judges' attitudes: he writes that "it requires only the barest understanding of the judicial process to appreciate the fact that statistics which, as ours do, refer only to the bare outcome of a decision, ignore the complex processes of reasoning which supports judicial decisions. . . . Also, it requires only the barest understanding of the logic of induction to realize that the discovery of a co-relation does not prove causation."[41] Having made this denial, Russell then casts about for justification of the process which takes up sixty-three pages, almost a quarter, of his study of the Supreme Court. He writes:

> While we are willing to acknowledge the limitations of quantitative studies of judicial phenomena ... we are equally anxious to insist that such studies do have some value. We can only appreciate their value by recognizing the questions to which they are addressed. ... we are convinced that by acquiring a firmer empirical basis for the answers we are inclined to give to these questions, our understanding of some of the issues ... will be enhanced.[42]

This statement, although very vague, and hardly enough to support an analysis over fifty pages long, does suggest that Russell's main claim is that his brand of quantitative analysis illustrates the impact of votes on issues. And yet examination of the issues dealt with by Russell reveals that few of them are really substantive. Most of the questions to which Russell seeks answers with a "firmer empirical basis" deal with the internal workings of the Court. They include such matters as: What is the nature of the Court's work? How often is it concerned with provincial law or Civil Code cases? Are there significant differences in its disposition of appeals from different sources? Is there any evidence of cultural alliances of judges on different issues?[43] The answers to many of these questions tell us nothing of judges' attitudes or the impact of judges' decisions. They simply verify details of the Court's jurisdiction and day-to-day operations. Such verification is valuable enough. But Russell's confusion as to his purpose and the scanty theoretical underpinnings he provides for his quantifying techniques render his analysis less helpful and less interesting than that of Peck and Weiler.

Canadian quantitative analysts of judicial decisions seem, then, to be uncertain of their art. Russell is confused, Weiler ambivalent, and Peck modest. The central point at issue is whether quantitative analysis is a means of examining judicial attitudes, or of examining judicial impact on issues. All

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[40] Russell himself would probably be the first to admit this crudity. See the quotation, *supra* note 2.

[41] *Id.* at 113.

[42] *Id.* at 113-114.

[43] *Id.* at 114.

comment must be seen in this context. Elsewhere I have attempted to criticize the fundamental assumptions, methodology and internal logic of scalogram analysis.[44] Of the fundamental assumptions, I wrote that behaviouralists are wrong in discounting the law as a key element in judicial decision, since much of a judge's attitude is a "legal attitude," and since, in any event, whatever it is that stimulates judicial response, it is the rules and principles of law that define the acceptable limits of that response.[45] I criticized the methodology, because I perceived it as requiring imposition by the researcher of *his* attitude on the judiciary when postulating the question or defining the issue raised by a given case.[46] And I pointed out, in these terms, what I considered an internal illogicality:

> The method can be represented by the following three propositions: (1) if responses are consistent, they are scalable; (2) if responses are scalable, they are unidimensional; (3) if responses are unidimensional, they are scalable meaningfully. The result of these three propositions is that if responses are either consistent or scalable (and we have already noted that these terms appear to by synonymous), then those responses are scalable meaningfully.[47]

The result of the three propositions seemed to me presumptuous if not illogical, because that result presumed precisely what scalogram analysis sets out to prove.

Professor Peck has convinced me that my criticisms of fundamental assumptions and methodology are invalid when scalogram analysis is presented as a form of "impact" analysis. This is simply because impact analysis purports to say nothing about judicial attitudes, or, at least, nothing of a categorical and definitive kind. I have referred already in this article to this point. Furthermore, Peck has pointed out to me that he early recognized the internal difficulty to which I have just referred.[48] Peck's writings suggest that it is precisely this difficulty which led him to reject scalogram analysis as a means of investigating judicial attitude. It should be observed that those who apparently have not joined Peck in this rejection (eg, Weiler and Russell) are still vulnerable to the criticisms I sketch above.

What is the attractiveness of these new behavioural and quantitative methods? Why are they competing with, if not supplanting, traditional substantive analysis of appellate judgments? I earlier mentioned "a variety of forces ... building in strength over a number of years"[49] which lately have coalesced. One such force is the thought of legal realists, which discounts formal legal reasons for judgment, and emphasizes the character and personality of the judge, together with his intuitive formulation of decisions which

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[44] Slayton, *supra* note 23.

[45] *Id.* at 399. At 400-401 I noted that judicial attitude may be very important when the judge decides what is the law which limits his freedom of action (when the judge decides what is Hart's secondary rule or Kelsen's *grundnorm*).

[46] *Id.* at 397.

[47] *Id.* at 396-7.

[48] See Peck, *supra* note 2, 45 Can. Bar Rev. 666 at 673, and 5 O.H.L.J. 6 at 19-21.

[49] See text, *supra,* at p. 429.

only following formulation are justified and rationalized in legal terms.[50] Another influence has been the growing use of quantitative methods in the fields of psychology and, particularly, political science; the imitative faculty is as strong among academic lawyers as it is elsewhere. Finally, one should not underestimate the power of simple boredom; many years of "the same" will inevitably lead those with intellectual curiosity along the paths of experimentation.

I have tried to suggest both limitations in the utility of scalogram analysis, and a degree of confusion in Canada surrounding application of such methods. If we harbour suspicions concerning the usefulness of specific quantitative approaches to the study of law, must we simply revert to the old ways? It is clear that we need not; the range of methods with which Canadian legal academics can and should grapple is enormous. Putting behaviouralism aside, we encounter, for example, what is referred to as the "political process" approach. Just as sociology and anthropology give rise to legal sociology and legal anthropology, so political science has generated a method which assumes "that judges are policy-makers, just like Presidents and congressmen and many administrators. Therefore, the appropriate subject to be studied in investigating the decision-making of courts is not law but the politics of the judiciary."[51] Yet another approach to judicial decisions is what has been termed "impact analysis." Professor Arthur S. Miller has identified two facets of impact analysis: "(a) an appreciation by judges of the consequences of their decisions; and (b) an evaluation by commentators of the social effects of judicial decisions."[52] Miller writes that impact analysis "looks to the consequences of judicial decisions and evaluates them in accordance with the extent to which they further the attainment of societal goals."[53] (It might be noted here that Peck probably belongs in the impact analysis camp, and is not a genuine behaviouralist.)[54] Lastly, we might mention "experimental jurisprudence," which is described as "a science of law based on a rigorous application of the scientific method to the study of the phenomena of lawmaking, the effect of law upon society and the efficiency of laws in accomplishing the purposes for which they came into existence."[55] Experimental jurisprudence, although much like impact analysis, goes further in that it attempts to formulate a hypothesis ("jural law") that "describes or predicts results which would occur on application of a similar regulatory law to similar problems."[56]

These various research theories and methods cannot replace traditional analysis, for as their very proponents admit, they are directed, not towards law as such, but towards political science, or sociology, or anthropology. These theories and methods can, however, help us place traditional analysis in context. Furthermore they represent a frontier of contemporary legal research. It would be appropriate for Canadians to develop that frontier, as they have developed others.

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[50] Frank's *Law and the Modern Mind* (New York: Brentano's, 1930) is representative of this line of thought. Professor Peck has suggested to me that although the approach of judicial behaviouralists is broadly similar to that of American legal realists, the real source of judicial behaviouralism is to be found in American political science.

Professor Peck calls legal realists the predecessors, but not the intellectual forebears, of the judicial behaviouralists.

[51] Schubert, *supra* note 22, *Judicial Policy-Making* 162.

[52] Miller, *On the Need for 'Impact Analysis' of Supreme Court Decisions* (1965), 53 Geo. L.J. 365, reprinted in Becker (ed.), *The Impact of Supreme Court Decisions* (New York: Oxford University Press, 1969) 7.

[53] *Id.* Pure impact analysis looks to the effect on society of "judicial policy outputs." There is, of course, a feedback process in operation: a recent article has examined how demands on the legal system from the political system are then transformed into outputs — see Grossman and Sarat, *Political Culture and Judicial Research,* (1971) Wash. U.L.Q. 177.

[54] Becker writes of impact analysis: "... this new focus of research is the second important breakthrough in the modern study of the Supreme Court [of the United States]. The first began seriously some ten years ago when social scientific theories and methods first were put to use in trying to determine the relative importance of extra-legal factors on the judicial decision, in general, and the Supreme Court decision, in particular. However, this modern approach to the study of influences on the Supreme Court decision failed to spark much interest among other political scientists or in the community of legal scholars." Becker, *supra* note 52 at 3. For a criticism of Becker's views of social science, see Schubert, *supra* note 51 at 165-183.

[55] Beutel, *The Relationship of Experimental Jurisprudence to Other Schools of Jurisprudence and to Scientific Method,* (1971) Wash, U.L.Q. 385. See also Beutel, *Some Potentialities of Experimental Jurisprudence as a New Branch of Social Science* (Lincoln: University of Nebraska Press, 1957).

[56] *Id.* at 386.